

ABSTRACT OF THE DISCLOSURE

(Subject)

To provide an electro-magnetic field analysis technique of
an electric rotating machine that filters through a specific
5 higher-harmonic at a specific portion.

(Construction)

The first electro-magnetic field analysis procedure of
analyzing the electro-magnetic field in an analysis space
based on the first boundary condition in terms of an electro-
10 magnetic variable assigned to the first specific portion in
the analysis space; a development procedure 2 of developing
the electro-magnetic variable at the second specific portion
in the analytic space, obtained in the first electro-magnetic
field analysis procedure, into each higher-harmonic component;
15 the second boundary condition setting procedure of assigning
an electro-magnetic variable in terms of at least one of the
higher-harmonic components, developed from the above electro-
magnetic variable, to the second specific portion as the
second boundary condition; and a procedure 3 of analyzing the
20 electro-magnetic field of the analysis space based on the
first and second boundary conditions are executed on a
computer.